Please amend the sentence that begins on page 14, line 22, which sentence begins with the word "Modern" as follows: --Modern strip gamma-ray detectors or Compton gamma-ray imaging detectors can be used to identify the 2D-logo pattern of gamma-ray watermarks, thereby increasing the "uniqueness" of the watermarks to far higher levels.--

Please amend the sentence that begins on page 7, line 5, which sentence begins with the word "At" as follows: --At any later time, the then-observed ratio of the line-intensities, which may be determined as precisely as desired by increasing the counting interval, from these two (or more) transitions of known half-life constitutes a 'clock' from which 'elapsed time' can be traced back--

Please amend the sentence beginning on page 9, line 1, which sentence begins with the word "If" as follows: --If a binary bit-string of information is to be encoded N bits per radioisotope, i.e., as a binary-fraction specifying the intensity of a given spectral line emitted by a single radioisotope comprising a portion of the radiological inventory of a gamma watermark, then $\sim 3 \times (2^N)^2$ gamma-ray counts of that spectral line need to be recorded, in order to have a statistically reliable estimate of the relative intensity which is statistically reliable at the level of three standard deviations about the true mean value--

Please amend the sentence beginning on page 10, line 13, which sentence begins with the phrase "The above steps" as follows: --The above steps might be repeated until, for instance, 1,000 spatially separated watermarks have been so written, with each watermark thus having a distinct (typically, unique) computer program-controlled digital content.--

On page 11, line 10, please delete "that" and insert --the--.

On page 11, line 12, please insert the word --the-- between "shows" and "spectral".

In the claims:

Please delete claim 28.

Please amend claims 6, 10, 11, 14, 16, 19, 23, 29, 34, 41, 44, 50, 54, 55, 58 and 61 as follows:

6. (Amended) The method of Claim 1, wherein at least one radioisotope of said at least two radioisotopes comprises radionuclides that are not detectable with standard types of field survey radiation-detection instruments in the pertinent environment of said tag.

10. (Amended) The method of Claim 1, wherein at least one radioisotope of said at least two radioisotopes comprises radionuclides which are carried on at least one bead of an ion-exchange or zeolite variety.

11. (Amended) The method of Claim 1, wherein at least one radioisotope of said at least two radioisotopes comprises radionuclides which are metered out from at least one solution-containing reservoir of an inkjet-type printing mechanism operating under algorithmic control.

14. (Amended) The method of Claim 13, wherein each radioisotope is metered on said object or upon a tag to be affixed to said object using ink-jet printer technology.

16. (Amended) The method of Claim 14, wherein each said radioisotope is delivered from an ink-jet printer cartridge to produce low level radioactive tags incorporated invisibly onto previously existing objects.

19. (Amended) The method of Claim 13, further comprising creating two dimensional signature logos detectable as low energy gamma-ray watermarks.

23. (Amended) A method for identifying an object, wherein said method comprises directing a high-energy radioactive ion beam at said object, wherein an

energy distribution is induced upon said ion beam by said object, wherein said

energy distribution is used to record a unique signature upon or within said object.

29. (Amended) The method of claim 10, further comprising incorporating

low-level radioactive tags into a label.

34. (Amended) The method of claim 10, wherein said previously existing

objects comprise works of art.

41. (Amended) The method of claim 2, wherein at least two radioisotopes

are employed to encode said time-of-creation of said tag, wherein the ratio of the

intensities of two gamma-ray-emitting transitions of two radioisotopes of different

half-lives is made to be equal to unity in said watermark, as a time-originating

convention, wherein at any later time, the then-observed ratio of line intensities of

said transitions constitutes a 'clock' whose 'elapsed time-reading' may be

determined as precisely as desired, simply by choosing how long to inspect the

clock.

44. (Amended) The method of claim 43, wherein said signature comprises

at least two code blocks, wherein the ordering of said code blocks constitute the total

digital signature and wherein the ordering of said code blocks is, from highest order

bit to lowest order bit in the signature, that bit-string decoded from the lowest-

spectral-energy gamma-ray line, with the other code blocks being decoded

sequentially in order of increasing gamma-ray spectral-energy, one block per

gamma-ray line, up to the code block corresponding to the highest-spectral-energy

gamma-ray line comprising the gamma-ray watermark.

50. (Amended) The gamma watermark of Claim 45, wherein at least one

radioisotope of said at least two radioisotopes comprises radionuclides that are not

detectable with standard types of field survey radiation-detection instruments in the

pertinent environment of said tag.

54. (Amended) The gamma watermark of Claim 45, wherein at least one

radioisotope of said at least two radioisotopes comprises radionuclides which are

carried on at least one bead selected from a group consisting of an ion-exchange

bead and a zeolite bead.

55. (Amended) The gamma watermark of Claim 45, wherein at least one

radioisotope of said at least two radioisotopes comprises radionuclides which are

metered out from at least one solution-containing reservoir of an inkjet-type printing

mechanism operated under algorithmic control.

58. (Amended) The gamma watermark of Claim 45, wherein said at least

two radioisotopes encode the time-of-creation of said tag and comprises different

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half-lives, wherein the ratio of the intensities of two gamma-ray-emitting transitions of said at least two radioisotopes is made to be equal to unity in said tag, as a time-originating convention, wherein at any later time, the then-observed ratio of line intensities of said transitions constitutes a 'clock' whose 'elapsed time-reading' may be determined as precisely as desired, simply by choosing how long to inspect the clock.

61. (Amended) The gamma watermark of claim 60, wherein said signature comprises at least two code blocks, wherein the ordering of said code blocks constitute the total digital signature and wherein the ordering of said code blocks is, from highest order bit to lowest order bit in the signature, that bit-string decoded from the lowest-spectral-energy gamma-ray line, with the other code blocks being decoded sequentially in order of increasing gamma-ray spectral-energy, one block per gamma-ray line, up to the code block corresponding to the highest-spectral-energy gamma-ray line comprising the gamma-ray watermark.

Please add the following new claims:

62. The method of claim 15, further comprising incorporating low-level radioactive tags into a label.